

### **ABSTRACT OF THE DISCLOSURE**

The method for operating an optical transponder, which performs maintenance of a signal in the optical transponder having a digital wrapper in an optical transmission system including multiple layers, includes (a) calling a processor  
5 for processing an interrupt when the interrupt is generated from the digital wrapper according to monitoring of a received signal; (b) the called processor detecting what defect is generated in the received signal and detecting whether or not the received signal requires maintenance; (c) performing defect processing in the case that a defect is detected at (b) or is cancelled; and (d)  
10 controlling the digital wrapper according to the defect and maintenance processing result.